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THE INFLUENCE OF SOCIAL IDENTITY ON MEAT CONSUMPTION REDUCTION

Joana Margarida da Cruz Marouca

Dissertation Report presented as a partial requirement for the degree of Master of Information Management, Specialization in Marketing Intelligence.

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ABSTRACT

Recently, societies have witnessed a widespread shift in consumer behavior, with the adoption of healthier and more sustainable consumption habits, such as the case of meat consumption reduction. To provide a deeper understanding of this consumption trend, this research draws from social identity theory to investigate how meat reduction intentions vary depending on the type of consumer (standard consumer, meat reducer, or abstainer). Results from two experimental studies (total N = 260) show that when consumers are in the presence of a non-meat consumer, they have higher willingness to reduce meat intake (Study 1) and that individuals belonging to a reducer or abstainer social identity are more inclined to make a consumption reduction, compared to standard meat consumers (Study 2). The underlying mechanism behind it is that people see non-meat consumers as individuals with higher esteem and status, and therefore as people with a more positive and desired social identity. Additionally, when a descriptive or healthrelated social norm is used, the meat reduction intentions are strengthened. These findings allow us to realize that the desire to obtain pride and status as a positive social identity and to follow social norms, act as drivers in reducing meat consumption.

KEYWORDS

Social identity; social norms; esteem; status; meat reduction

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1. INTRODUCTION

In recent years, the growing concerns about health, animal welfare, and the planet's sustainability highlighted the transition need to a reduced meat diet (Boer, Schösler & Aiking, 2017). However, although meat consumption is a practice that has received some criticism (Piazza et al., 2015), it is still verified that it is the default choice in a social norm perspective (Rosenfeld & Burrow, 2018). Thus, it is noticeable that there is a contradiction and moral conflict as people act inconsistently, while they show their love for animals (e.g., pets), but at the same time continue to consume meat (Piazza et al., 2015;). Indeed, only 5% of people worldwide identify as vegetarians, meaning only a small part of the population translates their concern into real behavior and action (Kemper, 2020). If the behavior of omnivores also changed, the impact on health, animal welfare and the environment would be much stronger. For instance, estimates indicated that a reduction in meat consumption can reduce mortality by 6 to 10%, improve health, and reduce greenhouse gas emissions (Springman et al., 2016). Some studies even suggest that in the future non-meat consumers might end up influencing omnivore consumption patterns (Janssen et al., 2016).

Despite the importance of meat reduction, there is little research on flexitarianism[1] (Kemper, 2020) and, to the best of our knowledge, none theorizing and testing meat reducers as a social identity. An emerging body of research has demonstrated that different types of motivations affect people's choice to rethink meat intake (Boer, Schösler & Aiking, 2017; Janssen et al., 2016; Hayley, Zinkiewicz & Hardiman, 2015; Kemper, 2020; Lentz et al., 2018; Malek, Umberger & Goddard, 2019; Mullee et al., 2017; Piazza et al., 2015; Plante et al., 2019; Radnitz, Beezhold & Dimatteo, 2015). However, the research about social identity as a motivation in dietary attitudes is rare. Prior research indicated predominantly health as a personal well-being reason, and only one study, as far as we are aware, identified social identity as a primary motivation to change meat consumption habits, specifically in people who reported to be vegetarian (Plante et al., 2019). Although studies show that the fact that meat eaters feel that the moral commitment of non-meat eaters is a threat to their own moral identities (Piazza et al., 2015), prior studies did not address the actual outcomes of that threat and how it can act as an incentive for meat eaters to reduce intake. Thus, to the best of our knowledge, the present research is the first study to consider attaining a desired social identity, selfesteem, and status as a motivator for people who still eat meat to reduce its consumption.

The current research draws from the Social Identity Theory (Liu, Thomas & Higgs, 2018; Dutot, 2020) to understand how perceived esteem and status of a meat reducer identity encourages people to rethink their meat intake. First, an experimental study was conducted to address the personality traits and existent social perceptions linked to both meat and non-meat consumers, as well as how being exposed to a meat vs. non-meat consumer influences meat reduction inclination. Further, a mediation and moderation study will be performed to understand what aspects of social identity influence the relationship between the condition and meat reduction intentions.

This research's contributions therefore lie in determining which personality traits of meat and non-meat consumers can be applied in identity-avoidance or aspiration manipulations with the intent to restrain meat intake (Bagci & Olgun, 2019). Secondly, this is the first study to conceptualize social identity motivation as a force for subscribing to a meat reduced diet (MRD), that is to ascertain

[1] People who limit their meat intake, yet still include meat in their diet.

if the aspiration to have a meat reducer social identity and identify with this social category, influences people to adopt a MRD (Hayley, Zinkiewicz & Hardiman, 2015). Thirdly, as advisable for intends of meat moderation, and because vegetarians represent a minority, making it difficult to generalize results and conclusions, this study contributes to the meat reduction literature by considering meat consumers willing to reduce their meat consumption as a broader identity category, instead of vegetarianism alone (Boer, Schösler & Aiking, 2017).

This research proceeds as follows. First, there is a review of existing and relevant literature on social identity theory, the identity of a meat reducer, status, and social norms to provide theoretical support to further develop a conceptual model and hypothesis. Finally, the results of qualitative and quantitative analyses of data from two studies, together with contributions, implications, and limitations acknowledged are presented.

2. LITERATURE REVIEW AND HYPOTHESIS

2.1. SOCIAL IDENTITY

The Social Identity Theory (Tajfel, 1981; Oyserman, 2007) proposes that social identity is the part of an individual's self-concept that derives from one's knowledge of his/her membership in a social group, together with the value and emotional meaning associated with that affiliation. This concept is multidimensional, in the sense that it includes cognitive and affective social identity. Cognitive social identity refers to the connection between the definition of a social group and the definition applied to self (i.e., perceived similarity), and affective social identity consists of the measurement of how positively individuals feel about their ingroup, as well as the degree of emotional commitment involved and sense of belonginess to the group (McGowan, Shiu & Hassan, 2016). Also, social identity integrates a personal dimension, that comprises how individuals perceive themselves, and a social dimension, that refers to how individuals view the social groups they belong to (Dutot, 2020).

This theory has been applied to several contexts. For example, in a study about disposal behavior of products, it was found that when linked to a consumer's identity, a product is more likely to be recycled instead of trashed, because trashing it would constitute an identity-threat (Trudel, Argo & Meng, 2016). This demonstrates the relevance and direct relation between social identity and sustainable behaviors, thus opening horizons for the notion to be applied in other contexts where green habits are examined.

Also, in a research paper about charity giving and motivations for doing so, a distinction of motives was recognized. When people give to animal, international, and social welfare charities, it shows a concern for beneficiaries, and can therefore be considered an other-oriented motivation, while when people give to religious, medical research, and health charities, they are reflecting their personal values and experiences, as well as the needs of the important social groups they belong to, and so motivations are self-oriented (Chapman, Masser & Louis, 2020). The acknowledgement of these discrepancies in motive, together with the recognition of identity motives to be as common or even more common than any other motive traditionally given in charity context, shows how the same can be considered to happen in other contexts where there is also an action with beneficial consequences for others and for the self.

Although most studies about social identity have shown that people exhibit weak levels of connection with outgroups, and typically want to be associated with ingroups, a study on product evaluations and brand connections has proven that it goes beyond that. The truth is dissociative reference groups, i.e., groups you do not want to be associated with, have a stronger influence on consumers than outgroups in general (White & Dahl, 2007). This finding allows to explore the possibility that regardless of the group one belongs to, people always avoid being associated with a group with negative perceptions. In fact, it has been proven that when people perceive they are in the same group as other people they do not identify with, they diverge in order to avoid signaling undesired identities, associated with negative traits (Berger & Heath, 2008).

When determining the motivations to avoid dissociative groups, self-identity and situational shifts are important factors, and ultimately, people are guided by the desire to represent a positive self-image to others and avoid communicating one that gives them an adverse social image (White & Dahl, 2007; Berger & Heath, 2008). Hence, when consumers recognize an inconsistency between their

evaluation and the self-concept, they reconsider if that product is still a key part of their identity or not, and in some cases, there is actual behavioral change (Chugani, Irwin & Redden, 2015).

Depending on social context, people choose to identify with certain social groups to feel better or to reduce uncertainty (McGowan, Shiu & Hassan, 2016). Because an individual holds a wide range of social identities, and any of them can be activated in a given context, they tend to categorize them in a hierarchy and the salient identity guides social interactions and how to behave in certain situations (Ding, Wan & Xu, 2016; Ward & Broniarczyk, 2011). In contexts where there is meaning and judgement change, and so people feel doubts in regard to what is the appropriate behavior, people tend to agree with others, choose to embrace a social identity that most likely symbolizes his/her own personality traits and is aligned with personal values, or adopt a social identity associated with something the individual aspires to be (Ward & Broniarczyk, 2011; Wood & Hayes, 2012). For instance, a study about health behaviors, where identity-avoidance manipulations were performed, it was concluded that people diverge specially in public contexts, and that because there is a shift in perceptions, people behaved healthier when unhealthy behaviors were linked with a dissociative group (White & Dahl, 2007; Berger & Rand, 2008). In this regard, it is reasonable to contemplate identity-shifting strategies in other prosocial domains.

Social identity threat can also be a form of identity-avoidance, and it occurs when people are confronted with negative feedback towards their ingroup, consequently related to important traits (Dalton & Huang, 2014). When an aspect of social identity is being threatened, there is a shift in preferences, evaluations, intentions, and choices, mainly when consumers want to protect individual self-worth and self-identity (White & Argo, 2009). Consumers are constantly being faced with identity-threatening situations, and the easiest path is to conform to social norms and expectations of others, even if it requires presenting in a way contrary to one's social identity. For example, in the context of gift giving, people reported to feel discomfort in acting the opposite way of their identity, but still did it just to please the receiver (Ward & Broniarczyk, 2011). Hereupon, it is rational to explore in what other contexts people will contradict their identity as a compliance strategy.

After all, despite the fact that the most common practice is for people to use products consistent with their social identity, when aspects of their own identity have become contextually imbued with negative associations and threatened, individuals have a tendency to avoid them (White & Argo, 2009). For this reason, it is recognizable that sometimes the strength of identification with the ingroup, i.e., the extent to which a member of the group defines the self as such (Dalton & Huang, 2014), is not enough to contradict one's values, and so people prefer to adopt a new and more coherent social identity.

2.1.1. Meat Reduction as a Social Identity

A reduced meat diet implies the limitation of frequency, type and/or portion of meat in one's average diet, which includes plant-based diets, semi-vegetarianism, flexitarianism, vegetarianism, and veganism (Hayley, Zinkiewicz & Hardiman, 2015). It is possible to segment consumers following a non-meat diet into altruistic and hedonistic, even though 81,8% of consumers who limited or eradicated their meat intake are multi-motivated. In fact, the most common causes to shift meat consumption habits are animal-related (89,4%), personal well-being (69,3%), and environmentalrelated (46,8%) (Janssen et al., 2016). However, to motivate meat consumers to reduce their meat intake, the most effective motivations are health and discovery of new tastes, showing how meat reducers prioritize well-being and self-focused matters above other concerns (Mullee et al., 2017; Lentz et al., 2018).

Social identity as a motivator can be defined as the desire to see oneself as a meat reducer and to identify with this social category. Because this is a subconscious and less salient reason to motivate action, it is possible that it has not been recognized and self-confessed yet as an important part that plays a role in the decision of meat reduction, possibly co-existing with other factors, such as ethical and health concerns (Plante et al., 2019).

2.2. STATUS

In particular contexts where people feel inferior on an important dimension of their identity, they adopt an identity management strategy, which among others, can consist of social mobility, that is mimicking a higher-status group to obtain admission (Larson, 2017). In consequence of feeling their status and self-image being jeopardized, there is a self-compensation process, where individuals change their consumption behavior and choose products that enhance a desired trait or identity (Zhao, Jin, Song, Cui, & Ding, 2018).

The concept of status has already been widely explored and is defined as the position in a particular social system and the respect one individual or group has in the eyes of others, in terms of social status and financial resources (Grier & Deshpandé, 2001; Bellezza, Paharia, & Keinan, 2016). Therefore, status is subjective to judgements of individuals' social worth to a group, including dimensions of prestige, respect, and esteem (Blader & Chen, 2014).

This theory has been applied to numerous fields, such as conspicuous consumption, which is the act of acquiring goods not for their value, but to signal social status and protect individual ego from future threats (Sivanathan & Pettit, 2010). This was similarly analyzed in relation to time, where busyness and lack of leisure time were investigated as indications of status, due to the fact that these characteristics are scarce and in demand, and thus perceived as rare and leading to positive status attributions (Bellezza, Paharia, & Keinan, 2016). Also, group's social status has been empirically connected with group's numeric status (Grier & Deshpandé, 2001), mainly due to the fact that people confer greater status and competence to nonconformity and minority groups, since they believe individuals have the autonomy to follow their own inclinations and tolerate the cost of deviating from the norm (Bellezza, Gino & Keinan, 2014). When it comes to sustainable behaviors, the role of status has also been explored. For example, the concept of anti-consumption was developed to understand environmental motivations in consumption reduction activities, which results in higher status evaluations, because the truth is being environmentally conscious is increasingly becoming a valued characteristic (Sekhon & Armstrong Soule, 2019). Specifically, the vegetarian identity, being a minority and anti-consumption group, has proven to go beyond patterns of food choices or self-identification, and instead it is derived from social norms and context (Rosenfeld & Burrow, 2018).

In the end, everyone particularly low-status groups seek to be evaluated as competent, and consequently to be high in status, because it offers an idea of a positive social identity (Oldmeadow & Fiske, 2010). So, people that are perceived to be high-status, have greater influence on people, and consequently more power to change and motivate behaviors (Blader & Chen, 2014), as they create an imagined future identity that presents greater recognition and respect, as well as numerous implications for health and well-being (Destin, Rheinschmidt-Same, & Richeson, 2017).

2.3. SOCIAL NORMS

Social norms have proven to motivate people to adopt more socially responsible behaviors, due to the societal benefits and feelings of joint endeavor associated with it (Melnyk et al., 2021). Hereupon, the relationship between the concept of social identity and social norms is noticeable, as people just want to signal a positive social identity for others.

Social norms are perceived standards that provide a guide to appropriate action and are either implicit in a culture, communicated in a given situation, or conveyed through environmental cues (Higgs, 2015). Thus, social norms highly influence behavior, because not following them can either lead to positive or negative emotional consequences, that is social approval or social disapproval, respectively (Higgs, 2015).

Several studies have already applied the concept of group norms to a wide variety of topics. For example, when healthy food choices were being assessed, people behaved in a direction consistent with what they perceived was their self-identity, primarily due to uncertainty-reduction reasons, i.e. the need to be right, and secondly owing to affiliation motives, that is the need to be accepted (Cruwys, Bevelander & Hermans, 2015). So, when primed with healthy social norms, creating a shared belief of what is appropriate to eat, people chose healthier options (Ivanic, 2016). Accordingly, in a social context where consumers were eating together, the tendency was to mimic the behavior of the meal companion, because not only it was perceived as being the appropriate behavior, but also there is a desire to represent a positive public image and impression to others (Liu, Thomas & Higgs, 2019; Higgs, 2015). Also, when deciding about consumption of eco-friendly products, it was noticed that observing the behavior of others was an important factor (Kim, Lee & Hur, 2012). Briefly, people absorb information about others' behavior in a given context to find what is the appropriate conduct – normative influence.

Nevertheless, it is necessary to distinguish and comprehend what types of norms are more effective in influencing people. Descriptive norms involve the perception of what others do and what behavior is typically observed, whilst injunctive norms entail the awareness of what others think you should do, consequently determining what is the acceptable and unacceptable social behavior (Cruwys, Bevelander & Hermans, 2015). Generally, and because consumers search for cues to interpret a situation and deduce social norms based on the observation of others' behaviors, descriptive social norms are more effective than injunctive social norms. However, it was found that injunctive norms have a higher influence when partnered with an extrinsic claim, which in other words means providing an incentive based on the aspiration to earn a reward or avoid punishment, rather than with an intrinsic motivation, that is doing something because it is personally rewarding (Kim, Lee & Hur, 2012).

Yet, there are always uncontrollable and less likely to change factors, like cultural standards. But still, it also depends on norm strength and tolerance for deviance. For instance, in tight societies like Portugal, there are strong and formal rules and low tolerance for deviance, which means there is more discrimination towards the ones that violate norms, whereas in loose cultures such as the Netherlands, the norms are weak and there is high tolerance for nonconformity (Li, Gordon & Gelfand, 2017).

Ultimately, acting in line with group norms is more likely to occur when individuals consider their affiliation to the group as being important to their self-identity (Liu, Thomas & Higgs, 2019). So, in cases where social norms are associated with a social identity people do not wish to indicate, norms are

rejected, and by the same reasoning, when norms are linked to an aspirational group, people will stick to them, even if it requires personal mobility to an outgroup (Higgs, 2015; Jetten et al., 2017).

2.4. Conceptual Model and Hypothesis Development

Firstly, it is conjectured that when meat consumption is not a central aspect of people's identities and is not frequently consumed, individuals are more likely to change consumption behaviors and reduce its intake. Oppositely, when being a meat consumer is identity-relevant, meaning it is part of people's self-identity (Berger and Heath, 2007), individuals are more resistant to a meat consumption change.

H1: The less meat consumption is part of an individual's consumption habits, the higher the inclination to reduce its intake. Therefore, standard consumers are less inclined to reduce meat consumption.

Research has shown that individuals tend to feel more valued within a minority group and perceive their status as higher, and consequently have an improved health and well-being (Jetten et al., 2017). Thus, the less a member of a group identifies with the ingroup, the more concerned they are in avoiding a negative ingroup status and a negative social identity (Martin & Rubin, 2016). The second hypothesis theorizes that the more a person takes meat consumption as a frequent habit, the less status is assigned to a non-consumer identity. On the other hand, people who have already reduced their meat consumption habits tend to attribute a higher level of status to this identity, including a higher esteem and general well-being (Jetten et al., 2017).

H2: Reduced meat intake leads to higher status assigned to a non-meat (vs. standard) consumer identity.

When there is a recognition of status of a group, the associated social identity is consequently increased (Martin & Rubin, 2016). Hence, the third hypothesis proposes that a desired social identity based on status acts as an unconscious motivation to reduce meat consumption, because behavior is identity-congruent, that is influenced by the congruency with important aspects of one's identity in that context (Boer, Schösler & Aiking, 2017), meaning that once a non-consumer's identity is recognized as positive, people will behave consistently to signal that identity by showing higher meat reduction intentions.

H3: Perceived status of a non-meat (vs. standard) consumer identity, increases meat reduction intentions.

As social norms serve as perceived standards that provide a guide to appropriate action (Higgs, 2015), it is expected that when the risks associated with meat consumption are made salient, reduction intentions are strengthened, since people seek approval and want to be liked by others (Banas et al., 2016). In fact, it has been proved that descriptive social norms and health messages are associated with increased intention to eat healthier (Liu, Thomas & Higgs, 2019), leading to the third hypothesis.

H4: Descriptive social norms and health messages strengthen the relationship between perceived status and meat reduction intentions.

The proposed conceptual research model (Figure 1) shows perceived status as a mediator between the group of the consumer and inclination to reduce meat consumption, and social norms as a moderator between the mediator and reduction intentions.

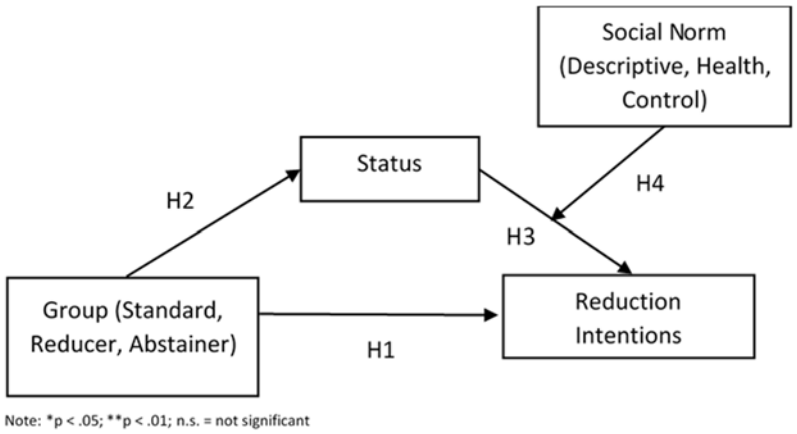

Figure 1 - Conceptual Research Model

3. STUDY 1

3.1. METHOD

Due to the fact that consumers hold mental perceptions of different social groups and their members, including group norms and behaviors (McGowan, Shiu & Hassan, 2016), it was necessary to conduct a study to understand the existing social perceptions about meat consumers and nonmeat consumers. Knowing the social meanings that consumers attribute to an identity, will help to understand consumer decision making (Wood & Hayes, 2012). In this study, a one-factor two-level (meat vs. non-meat consumer) between-subjects design is applied to explore if an individual's meateating habits influence the perception of others about multiple traits, and if the similarity in meat consumption habits affects judgements and feelings towards the individual.

This study was conducted via an online experiment produced on Qualtrics and distributed on social media channels to a sample of 100 participants (58% female, M_{age} = 23.7, *SD* = 4.22). A one factor two level design was used, where respondents were randomly assigned to one of the two existing conditions, that is an image and a short description of a meat consumer versus a non-meat consumer. Besides the measures described in the following section and that can be seen in the appendix in more detail, respondents were asked to briefly provide their thoughts about the individual in a short paragraph. Both quantitative and qualitative research were applied to analyze the outcomes of this study.

3.1.1. Measures

Morality. Because moral concerns are a common motivation for people to restrict their meat intake (Piazza et al., 2015), it was appropriate to measure the individual's perceived levels of morality. Respondents were asked to rate on a 7-point scale (1 = *not at all*, 7 = *very much*) to what extent they

believe the individual is caring, compassionate, friendly, generous, helpful, honest (Samper, Yang & Daniels, 2017), concerned, ethical, kind-hearted, and moral (Olson, et al., 2016). The scale generated was internally consistent, α = 0.94.

Perceived Healthfulness. Healthfulness was measured by using an adapted scale (α = .78; Steim & Nemeroff, 1995), with a 7-point Likert-type item, ranging from 1 (*not at all*) to 7 (*very much*). Respondents indicated to what degree they estimated the individual is healthy, hardworking, disciplined, follows norms, is health-conscious.

Feelings of Threat, Trust and Mood. Participants' feelings of threat, trust, and mood were accessed using a 7-point scale (1 = *not at all,* 7 = *very much)*. They were asked to indicate at what level they felt happy and anxious (Liu, Thomas & Higgs, 2019); threatened, attacked, and challenged (Dalton & Huang, 2014); suspicious and concerned (Packard, Gershoff & Wooten, 2016) to the exposure to the individual. The internal consistency of this scale was satisfactory, α = 0.79.

Modesty. Perceived modesty was ranked through level of agreement or disagreement with each item on a 1-7 scale (1 = *strongly disagree,* 7 = *strongly agree)*. The items tackled were "*Believes they are better than others", "Thinks highly of themselves", "Make themselves the center of attention", "Dislike talking about themselves"* (α = .76; Packard, Gershoff & Wooten, 2016).

Interest. The interest to meet and know more about the individual presented was measured in a 7-point scale (1 = *not at all interested,* 7 = *extremely interested*) (Dalton & Huang, 2014).

Similarity. Participants were asked to report how similar they considered themselves compared to the individual on a 7-point Likert scale (1 = *not at all similar to me,* 7 = *very much similar to me*) (Packard, Gershoff & Wooten, 2016).

Perceived Discrimination. Due to the fact that disadvantaged groups that constitute minorities are more likely to experience discrimination based on their identity (Bagci & Olgun, 2019; Chaney, Sanchez & Maimon, 2018), it was important to address if people acknowledge and verify this. This item was measured on an adapted scale ranging from 1 (*not at all*) to 7 (*all the time*) to tackle how much respondents believe the individual is discriminated because of her identity (Bagci & Olgun, 2019).

Social Identity Needs. The social identity needs scale (α = .82; Bagci & Olgun, 2019) was utilized to comprehend to what extent on a 7- point scale (1 = *strongly disagree,* 7 = *strongly agree*) people agreed or disagreed to statements about the individual's esteem ("*She should feel proud"),* belongingness (*"She should feel a sense of belonging"*), and distinctiveness ("*She should feel special"*).

Meat Consumption Frequency. This scale (Boer, Schösler & Aiking, 2017) was used with the purpose of discovering how many days in a week participants eat meat. A 5-item measure with the options going from "*6-7 days per week"* to "*none, because I do not eat meat*" was employed and on a more general extent two segments were identified, and consequently a new variable called "groups" was created, where meat consumers refer to everyone who eats meat at least one day per week and non-meat consumers are the ones who do not consume it at all.

Meat Reduction Intentions. Participants were requested to provide if they had made or are currently making efforts to reduce meat consumption (Lentz et al., 2018), in which the only options were *yes* or *no*. The intent of this question was to recognize meat reducers and standard consumers.

Meat Reduction Willingness. Lastly, respondents were asked to tell how willing they would be to consider reducing their meat intake sometime in the near future on a 7-point scale (1 = *not at all willing*, 7 = *extremely willing*) (Lentz et al., 2018).

3.2. RESULTS

Firstly, a qualitative analysis of the answers provided to the open-ended questions was completed (see in more detail on Appendix B). For this, only answers composed of at least one wellwritten word, relevant to answer the proposed question, and that express an opinion were considered. Commonly, respondents on the meat consumer condition consider a meat consumer a normal (32,6%), healthy (30,43%), and happy (34,78%), but also recognize that meat consumers could have better habits (10,86%). About non-meat consumers, people consider them people concerned about the environment and well-being of the planet (54,17%), a healthy person, concerned with his/her own well-being (41,67%), and concerned with animal well-being (29,16%).

Sample. A descriptive statistical analysis shows the frequencies of participants' meat consumption habits. Regarding meat consumption frequency (M = 2.41, SD = 1.2), 24% of people eat meat 6-7 days per week, 37% eat 4-5 days per week, 22% eat 2-3 days per week, 8% eat 1 day or less per week, and 9% do not consume meat. On meat reduction intentions (M = 1.37, SD = 0.49), it is possible to affirm that most of participants (63%) have already or are currently making efforts to reduce meat consumption, while 37% do not show intentions to reduce meat consumption. When asked about their willingness to reduce meat in a near future (M = 3.42, SD = 1.15), only 6% of participants exhibited that there was no willingness to act in that manner.

Morality. A one-way between-groups MANOVA was performed to investigate the influence of the condition (meat and non-meat) on morality items. Overall, a non-meat consumer is considered to be more moral (M = 4.77, SD = 1.07) than a meat consumer (M = 4.30, SD = .88). There is a significant difference (based on Wilks' Lambda) in what respects the morality items, related to each condition (meat and non-meat) (F(11,88) = 2,55, p = .008, ηp^2 = .242). Statistically significant difference between the condition (meat and non-meat) and the dependent variables compassionate (p = .002), concerned (p = .000), ethical (p = .008), and moral (p = .002) was found. Non-meat consumers are considered more compassionate (M = 5.60, SD = 1.33 vs. M = 4.76, SD = 1.35), concerned (M = 5.58, SD = 1.53 vs. M = 4.38, SD = 1.50), ethical (M = 5.32, SD = 1.45 vs. M = 4.52, SD = 1.53), and moral (M = 5.44, SD = 1.39 vs. M = 4.64, SD = 1.17) than meat consumers.

Healthfulness. One-way between-groups MANOVA was performed to explore the effect of the condition (meat and non-meat) on healthfulness items. There is a significant difference (based on Wilks' Lambda) in what respects the healthfulness items, related to each condition (meat and nonmeat) (F(5,94) = 6,64, p = .000, ηp^2 = .261). There is a statistically significant difference between the condition (meat and non-meat) and the dependent variable health-conscious (p = .003). Therefore, non-meat consumers are perceived as more health-conscious (M = 5.72, SD = 1.42) compared to meat consumers (M = 4.80, SD = 1.55).

Perceived Discrimination. To analyze perceived discrimination, a one-way ANOVA was conducted to see the impact of the condition participants were assigned to (meat vs. non-meat consumer) and the dependent variable related to discrimination. There is statistically significant difference between the condition (non-meat and meat) on the dependent variable perceived discrimination (F(1, 98) =

9.59, p = .003, ηp^2 = .09). In general, non-meat consumers are perceived as more discriminated by their social identity (M = 3.60, SD = 1.67) than meat consumers (M = 2.64, SD = 1.43).

Feelings of Threat, Trust, and Mood, and Social Identity Needs. To understand if belonging or not to the same social group (ingroup or outgroup) shapes views in different constructs, one-way between-groups MANOVAs were done with condition and group as fixed factors to the variables of feelings of threat, trust, and mood and social identity needs. Although there is no statistically significant difference between the intersection of condition (non-meat and meat) and group on the set of scale items of feelings of threat, trust, and mood altogether (F(7,90) = 1.87, p = .083, ηp^2 = .13), nor to the majority of items, the intersection between the condition participants are exposed to and the group they belong to is statistically relevant to the level of happiness felt by consumers (p = .003). Non-meat consumers feel happy when confronted with another non-meat consumer (M = 6.33, SD = 0.58) and do not feel as happier when exposed to a meat consumer (M = 2.83, SD = 1.68). Regarding meat consumers, they feel equally happy in the presence of other meat consumers (M = 4.55, SD = 1.42) or non-meat consumers (M = 4.55, SD = 1.68). Additionally, a statistically significant difference between the intersection of condition (non-meat and meat) and group on the scale addressing social identity needs (F(3, 94) = 2.82, p = .043, ηp^2 = .083) was observed. The intersection between the condition participants are exposed to and the group they belong to is statistically relevant in the perception of how proud (p = .017) and the sense of belonging one should feel (p = .025). Non-meat consumers completely agree that non-meat consumers should feel proud (M = 7.00, SD = .00), while they believe meat consumers do not have that many reasons (M = 3.50, SD = 2.26). Meat consumers also believe non-meat consumers have the right to feel prouder (M = 5.21, SD = 1.59) than meat consumers (M = 4.52, SD = 1.49). Generally, it is believed that non-meat consumers should feel a higher sense of belonging (M = 5.08, SD = 1.41) than meat consumers (M = 4.72, SD = 1.40). Non-meat consumers believe a non-meat consumer like them feels a really high sense of belonging (M = 6.67, SD = .58), while meat consumers feel a poorer sense of belonging compared to them (M = 4.17, SD = 2.32). Meat consumers evaluate the sense of belonging in both conditions very similarly, but slightly higher for non-meat consumers (M = 4.98, SD = 1.39) compared to meat consumers (M = 4.80, SD = 1.25).

Similarity and Interest to Meet. Then, the same approach of ingroup manipulation was applied to similarity and interest to meet. A one-way ANOVA was performed and the interception between the condition participants are exposed to and the group they belong to is statistically relevant in perceived similarity (F(1, 96) = 43,06, p = .000, ηp^2 = .179). As expected, non-meat consumers show a much higher level of similarity with non-meat consumers (M = 6.33, SD = .58) than with meat consumers (M = 2.00, SD = .89), and meat consumers show a higher level of perceived similarity with meat consumers (M = 4.27, SD = 1.58) than with non-meat consumers (M = 3.77, SD = 1.37). In regard to interest to meet, the intersection between the condition participants are exposed to and the group they belong to is statistically relevant (F(1, 96) = 7.33, p = .008, ηp^2 = .071). Non-meat consumers feel a much higher level of interest to meet other non-meat consumers (M = 6.33, SD = .58) than to meet meat consumers (M = 3.00, SD = 1.41). Meat consumers feel nearly the same interest to meet other meat consumers (M = 4.34, SD = 1.74) or non-meat consumers (M = 4.43, SD = 1.57).

Sense of Esteem Mediation. Finally, a mediation analysis using the PROCESS macro version 3.5 in SPSS (Model 4; Hayes, 2020), was conducted (see Figure 2). We used 5000 bootstrap samples and 95% confidence intervals. Hypothesis 1 assumed that exposure to non-meat consumers induces more perceived sense of esteem than exposure to meat consumers, which was supported (β = -.92, SE = .32,

p <.05). Also, corroborating hypothesis 2, higher levels of perceived esteem led to a greater intention to reduce meat intake (*β* = .17, *SE* = .07, *p* <.05). The direct effect of the condition on willingness was not statistically significant (*β* = -.08, *SE* = .23, *p* = .72). Yet, the indirect effect of interaction between the independent and dependent variable was significant (*effect* = -.16, CI_{95}: .001, -.367), hence confirming the indirect relationship between exposure and willingness to reduce meat intake and justifying the necessity to consider further variables as mediators or moderators for this relationship in the following study.

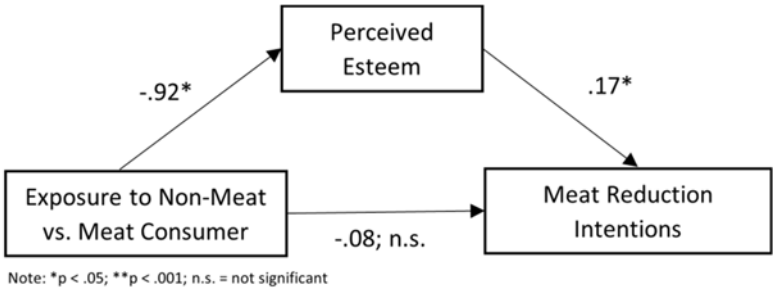

Figure 2 - Mediation Model of Study 1

3.3. DISCUSSION

This study set out to examine social perceptions of meat and non-meat consumers. The existent opinions held allow to associate a meat reducer social identity with someone who is more compassionate, concerned, ethical, health-conscious, and moral than people who regularly consume meat, going accordingly with recent studies on dietary identities (De Groeve et al., 2021). Moreover, non-meat consumers are believed to suffer more from discrimination, criticism, and negativity because of their social identity, which means there is stigma solidarity as people recognize it as a minority group and feel more empathetic for them (Chaney, Sanchez & Maimon, 2018).

The results of study 1 support the idea that the exposure to a non-meat consumer leads to higher willingness to reduce meat intake, which was largely explained by the sense of esteem ascribed to a non-meat consumer. In fact, participants exposed to a non-meat consumer attribute a higher perceived esteem to the individual, while in the presence of a meat consumer less sense of pride is attached to a non-meat consumer. Thus, perceived esteem acts as a mediator between exposure to a non-meat consumer or meat consumer and willingness to reduce meat consumption.

The findings of this study provide initial evidence that a meat reducer identity is perceived as a more positive social identity compared to a regular meat consumer. In the next study, a new approach will be performed in which participants will be divided based on their meat consumption frequency to understand if reduction intentions differ between groups. Additionally, and for the reason that several studies have showed the implications of status on esteem, namely how feeling proud implies having a high-status association (Martiny & Rubin, 2016; Jetten et al., 2017; Larson, 2017), status will be considered as a new variable that will possibly explain the differences in reduction intentions between consumption groups. A social norm manipulation will also be encompassed, to acknowledge if giving

participants information about what is the appropriate behavior in regard to meat reduction influences attitudes.

4. STUDY 2

4.1. METHOD

It is recognized that people are constantly searching for cues to interpret a situation and deduce social norms based on others' behaviors (Kim, Lee & Hur, 2012). For that reason, a one-factor threelevel design was used to understand the influence of social norms on meat reduction intentions, where participants were randomly allocated to one of the three social norm conditions (descriptive social norm message vs. health message vs. control message) (Liu, Thomas & Higgs, 2019). In the descriptive social norm condition, participants were exposed to a message about what is the proper behavior when it comes to meat consumption: 'Did you know that 70% of the global population are already reducing their meat consumption?' (Forbes, 2018). In the health condition participants were exposed to a message describing some health benefits of reducing meat consumption 'Did you know that reducing meat consumption lessens the risk of certain cancers, such as colon, stomach, female, and prostate?' (Radnitz, Beezhold & Dimatteo, 2015). In the control condition, participants were subjected to a message about global internet usage: 'Did you know that 4.66 million (59%) people in the world are active Internet users?' (Statista, 2021). For each participant, one poster was presented containing one of the three messages above. The image used on the three posters was a big blue and yellow globe, selected based on the fact that all messages represent behaviors of the world population. Participants were asked to look at the poster and study it very carefully, as questions about it would be asked later. The intention of this request was essentially to avoid the participant to understand the main purpose of the study.

This study was performed via an online experiment created on Qualtrics and distributed on Amazon MTurk in exchange for a nominal payment to a sample of 160 participants (35.6% female, M_{age} = 34.74, *SD* = 10.48). There were participants from 13 different nationalities. However, the majority is from India (39,4%) or the United States of America (38,1%) (*M* = 118.10, *SD* = 61.66).

4.1.1. Measures

Meat Reduction Intentions. Participants were asked to indicate how likely (1 = *very unlikely,* 7 = *very likely*), willing (1 = *very unwilling,* 7 = *very willing*), and inclined (1 = *very uninclined,* 7 = *very inclined*) they are to reduce their meat consumption (α = 0.95; White et al., 2015)

Meat Consumption Frequency. The same scale used on study 1 was employed to discover week frequency of participants' meat consumption (Boer, Schösler & Aiking, 2017). The respondents were divided into three consumer groups (standard, reducers, and abstainers) (Lentz, et al., 2018), and consequently a new variable called "Group" was created. Standard consumers (n = 63) were those who reported to consume meat between 4 and 7 days a week, reducers (n = 91) were defined as those who only eat meat 1 to 3 days a week, and abstainers (n = 6) were those who answered 'None, because I do not eat meat' to the question of 'How many days per week do you eat meat?'.

Strength of Identification with the Ingroup. The level of identification was measured using a 7point Likert-type adapted scale (1 = *strongly disagree*, 7 = *strongly agree*) (Dalton & Huang, 2014). The items were adjusted depending on participant's meat consumption frequency, that is, when the respondent reported to consume meat at least one day per week, the statements were directed to meat consumers as an ingroup (ex. 'I feel strong ties to other meat consumers'), and on the other hand, when the participant stated no meat consumption, the statements were adapted to measure the strength of identification with other non-meat consumers (ex. 'I feel strong ties to other nonmeat consumers') (see Appendix C for a complete list of items).

Snap Judgements. This scale was used to measure perceived status of a non-meat consumer in a subtle manner, as the two items of status were mixed with unrelated items, so participants would not focus only on that aspect (α = 0.91; Bellezza, Paharia, & Keinan, 2016). Therefore, only items 'This person has high status' and 'This person is respected' were considered for analysis.

Similarity. Equally to study 1, participants reported how similar they considered themselves compared to a non-meat consumer (individual in the image) on a 7-point Likert scale (1 = *not at all similar to me,* 7 = *very much similar to me*) (Packard, Gershoff & Wooten, 2016).

Perceived Discrimination. Participants were asked about the level of discrimination they think is felt by a non-meat consumer on a 7-point scale (1 = *not at all*, 7 = *all the time*) (Bagci & Olgun, 2019).

Feelings of Threat. The level of threat felt by participants towards a non-meat consumer was assessed using an adapted scale (α = 0.87; Dalton & Huang, 2015) ranging from 1 (*not at all*) to 7 (*very much*). Respondents reported the extent to which they felt threatened, attacked, and challenged by the individual.

Trust. Participants were asked to specify the degree of suspiciousness and concern sensed towards a non-meat consumer on a 7-point scale (1 = *not at all*, 7 = *very much*) (α = 0.78; Packard, Gershoff & Wooten, 2016).

Collective Self-Esteem. This scale was adapted from Dutot (2020), where the importance of including the collective dimension of self-esteem when addressing identity is confirmed. The level of agreement to a total of ten statements (see Appendix C) was measured on a 5-point scale (1 = *totally disagree*, 5 = *totally agree*).

Demand Checks. Participants were asked to briefly describe the content (context and picture) of the poster and rate the poster in terms of believability, relatability, meaning, clarity, and professional appearance on a 5-point Likert scale (Liu, Thomas & Higgs, 2019). This scale was used solely as distraction maneuver from the true purpose of the study and was not analyzed further.

Health Regulatory Focus. This scale was applied to measure respondents' health concerns and was analyzed as two distinct variables, namely health promotion focused, which relates to how preoccupied consumers are about improving their health state or obtaining health-related gains, and health prevention, which refers to the level of consumers' concerns about protecting their health state or avoiding health-related losses (Gomez, Borges & Pechmann, 2013). A total of eight items were assessed using a 7-point agreement scale (1 = *strongly disagree*, 7 = *strongly agree*).

4.2. RESULTS

Sample. A descriptive statistical analysis shows the frequencies of participants' meat consumption habits. Regarding meat consumption frequency (*M* = 2.72, *SD* = 1.08), 16,3% of people eat meat 6-7 days per week, 21,1% eat 4-5 days per week, 36,9% eat 2-3 days per week, 20% eat 1 day or less per week, and 3,8% do not consume meat. From the 160 people who participated in this study, there was 63 people (39.4%) in the standard consumer group, 91 in the meat reducer identity (56.9%), and only 6 participants (3,8%) are abstainers (non-meat consumers), showing that there is still a vast majority of people consuming meat. On likeliness to reduce meat consumption (M = 3.95, SD = 2.04), it is possible to affirm that, on a scale from 1 to 7, the majority of participants are very likely (more or equal to 4 on the scale) to make a reduction (65%), and only 8.8% of participants are not likely at all to change this consumption habit. When asked about their willingness to reduce meat (M = 4.13, SD = 2.09), only 8.8% of participants exhibited that there was no willingness to act in that manner. Once again, the majority of respondents are very willing to reduce consumption (65.6%). This justifies the importance of the study since the target is everyone willing to make a reduction. When it comes to people's inclination to make a reduction in meat consumption, only 6.9% are uninclined to do it. 57.5% of participants are very inclined to reduce one's meat consumption. A frequency descriptive analysis was also performed for the exposure to each type of social norm, which was practically equally dispersed, with the health condition being showed to 55 participants (34.4%), the control condition to 53 people (33.1%), and the descriptive social norm to 52 respondents (32.5%) (M = 2.01, SD = .81).

Reduction Intentions. A one-way between-groups ANOVA was performed to investigate the direct influence of Social Norms on Reduction Intentions. Participants exposed to a descriptive (M = 4.23, SD = 1.99) or health social norm (M = 4.13, SD = 2.01) are more likely to reduce meat consumption than when confronted with a control condition (M = 3.49, SD = 2.07). Similarly, respondents in the health (M = 4.42, SD = 2.03) or descriptive condition (M = 4.37, SD = 1.94) are more willing to make a reduction in meat consumption than the ones in the control condition (M = 3.60, SD = 2.23). In regard to inclination to reduce meat consumption, participants exposed to a descriptive (M = 4.10, SD = 1.85) or health message (M = 4.05, SD = 1.98) show higher inclination than the ones subjected to a control condition (M = 3.15, SD = 2.08). These results allow to conclude that exposure to health and descriptive social norms incite higher meat reduction intentions. Still, there is no statistically significant difference (based on Wilks' Lambda) between groups concerning the condition (health, descriptive, and control) and reduction intentions ($F(6, 310) = 1.44$, $p = .199$, $\eta p^2 = .027$). Statistically significant difference was only found between the condition (health, descriptive, and control) and inclination to reduce meat consumption ($p = .022$). Additionally, statistically significant difference was found between the health and control condition ($p = .04$) and the descriptive and control condition ($p = .03$) using an LSD Post-Hoc analysis.

A new variable "Group" was created to segment participants into three consumer groups based on their meat consumption frequency (Lentz, et al., 2018). A one-way between groups ANOVA was completed to examine the direct effect of the Group the participant belongs to on Reduction Intentions. As expected, the likeliness (M = 3.21, SD = 1.90), willingness (M = 3.48, SD = 2.01), and inclination (M = 3.27, SD = 1.82) to reduce meat consumption is lower for meat consumers who eat it more frequently (standard). Meat reducers, on the other hand, show higher likeliness (M = 4.30, SD = 1.97), willingness (M = 4.41, SD = 2.02), and inclination (M = 3.99, SD = 2.02) than regular meat consumers to reduce their intake. However, non-meat consumers (abstainers) are the ones who, understandably, are more likely (M = 6.5, SD = .84), willing (M = 6.83, SD = .41), and inclined (M = 5.67,

SD = 2.16) to reduce meat consumption. There is a very statistically significant difference (based on Wilks' Lambda) in every group regarding reduction intentions (F(6, 310) = 4.17, p = .000, ηp^2 = .075). This allows to conclude that the more frequent is one's meat consumption, the harder it will be to show reduction intentions. A Post-Hoc analysis was completed with equal variances assumed (Tukey). Every crossing of groups showed statistically significant differences (p <.05), except regarding inclination to reduce meat consumption for the intersection between meat reducers and abstainers (p = .107), and the one between standard consumers and meat reducers (p = .067).

Collective self-esteem. A one-way ANOVA was performed to explore the influence of the group the participant belongs to on collective self-esteem. A new variable called 'CSE' was created with the three items that showed individual statistically significance. Statistically significant difference was found (based on Wilks' Lambda) between CSE and the group the participant belongs to (F(6, 310) = 2.55, p = .020, ηp^2 = .047). Also, there was statistically significant difference between groups (p <.05). A Post-Hoc analysis was performed with equal variances assumed (Tukey). The crossing between standard consumers and reducers was the only statistically relevant (p <.05), thus demonstrating that the fact that standard meat consumers feel a lower sense of collective self-esteem (M = 2.69, SD = .63) than meat reducers (M = 2.99, SD = .45) can act a motivation for meat reducers to adopt a stronger stance in reducing meat intake.

Strength of Identification with the Ingroup. A one-way ANOVA was conducted to evaluate the impact of the participant's group on the level one identifies with his/her ingroup. Overall and as expected, non-meat consumers feel a higher level of identification with their ingroup (M = 4.69, SD = 1.23), followed by standard meat consumers (M = 4.14, SD = .99), while meat reducers feel the lowest identification of the three groups (M = 4.03, SD = .75). This shows that not only meat reducers do not identify as strongly as standard meat consumers to the meat consumer identity, but also that abstainers consider being a non-meat consumer as a more important part of the self that the other groups. Nevertheless, there is no statistically significant difference (based on Wilks' Lambda) on strength of identification based on group (F(12, 304) = 1.40, p = .169, ηp^2 = .052).

Status. Meat reducers and non-meat consumers show similar values for perceived status (M_1 = 5.30, SD_1 = 1.31; M_2 = 5.50, SD_2 = 1.87) and for the perceived extent to which a non-meat consumer is respected (M_1 = 5.67, SD_1 = 1.09; M_2 = 6.00, SD_2 = 1.55). Meat consumers, in comparison to the other two groups, believe a non-meat consumer has a lower status (M = 4.63, SD = 1.40) and are not that much respected (M = 5.22, SD = 1.18). There is statistically significant difference (based on Wilks' Lambda) between status and the group of the respondent (F(4, 312) = 2.54, p = .040, ηp^2 = .032). A Post-Hoc analysis was performed with equal variances assumed (Tukey). The crossing between standard consumers and reducers was the only statistically relevant for both perceived status (p = .010) and perceived respect (p = .047). As expected, the more meat a person consumes, and consequently the more distant from a non-meat identity, the less status is assigned to that group.

Similarity. Non-meat consumers, understandably, feel the highest level of similarity towards a non-meat consumer (M = 5.67, SD = 1.37), followed by meat reducers (M = 4.33, SD = 1.60). Meat consumers feel the least similarity to a non-meat consumer out of the three groups (M = 3.54, SD = 1.37). Similarity shows statistically significant difference between groups (F(2, 157) = 7.59, p = .001, ηp^2 = .088). As anticipated, the less meat a person consumes, i.e., the more a person is close to a non-meat consumer identity, the more similar he/she considers him/herself to one.

Perceived Discrimination. Abstainers believe more that a non-meat consumer is discriminated because of his/her identity (M = 4.33, SD = 1.86) than both meat reducers (M = 3.56, SD = 1.90) and standard meat consumers (M = 3.56, SD = 1.83). Though, there is no statistically significant difference between groups (F(2, 157) = .49, p = .613, ηp^2 = .006).

Feelings of Threat. On the whole, meat reducers are the ones that feel more threatened by a non-meat consumer (M = 2.56, SD = 1.87). Then, consistently, are standard meat consumers (M = 2.38, SD = 1.92), and finally abstainers (M = 2.22, SD = 2.22). However, there is no statistically significant difference (based on Wilks' Lambda) between the groups (F(6, 310) = 1.66, p = .131, ηp^2 = .031).

Trust. As before, meat reducers show higher trust levels towards a non-meat consumer (M = 3.09, SD = 1.97). Standard (M = 2.41, SD = 1.96) and abstainers (M = 2.50, SD = 2.49) feel similar levels of trust. There is statistically significant difference (based on Wilks' Lambda) between the groups (F(4, 312) = 4.04, p = .003, ηp^2 = .049).

Health Regulatory Focus. A one-way ANOVA was conducted to investigate the effect of the group of the participant on health promotion and prevention. Non-meat consumers are the ones that show a highest health promotion focus (M = 5.63, SD = .91), immediately followed by meat reducers (M = 5.48, SD = 1.04). Standard consumers show the lowest level of health promotion focus out of the three groups (M = 4.84, SD = 1.13). There is statistically significant difference (based on Wilks' Lambda) on health promotion between the three groups (F(10, 304) = 2.43, p = .009, ηp^2 = .074). A Post-Hoc analysis was performed with equal variances assumed (Tukey). The crossing between standard consumers and meat reducers was the only statistically different (p = .001). Regarding health prevention, meat reducers show the highest levels (M = 5.14, SD = 1.17), right before abstainers (M = 5.00, SD = .62). Standard consumers show the lowest levels of health prevention of the three groups (M = 4.75, SD = 1.08). Nevertheless, there is no statistically significant difference between groups on health prevention focus (F(6, 308) = 1.33, p = .242, ηp^2 = .025).

The results of the moderated mediation analysis using the PROCESS macro version 3.5 in SPSS (Model 14; Hayes, 2020), are shown in Figure 3, using 5000 bootstrap samples and 95% confidence intervals. Perceived status of a non-meat consumer was used as the mediator between the group of the individual (standard, reducer, or abstainer) and inclination to reduce meat consumption, while social norms (descriptive, health, or control) were treated as a moderator in the relationship between status and inclination to reduce. The group a person belongs to was not significantly associated with inclination to reduce (β = .44, SE = .25, p = .08), therefore indicating that the direct effect of group on reduction inclination is nonexistent. However, the closest a person is to being a meat abstainer, the more perceived status is attributed to a non-meat consumer (β = .51, SE = .16, p < .05), demonstrating how indicating an aspirational status symbol acts as a motivator to become a meat reducer or abstainer. As predicted in Hypothesis 3, the type of social norm an individual is exposed to moderates the effect of perceived status on inclination to reduce meat consumption (β = -.36, SE = .13, p < .05), meaning that this relationship was stronger for people subjected to a descriptive (*effect* = .59, CI_{95}: .164, 1.055) or health social norm (effect = .40, CI_{95}: .113, .742) versus a control condition (*effect* = .22, CI_{95}: -.001, .540). Overall, this evidence supports status as a full mediator of the relationship between consumption group and inclination to reduce meat. Results suggest that individuals with lower meat consumption frequency were motivated by status to reduce intake, especially when they were exposed to a descriptive or health social norm.

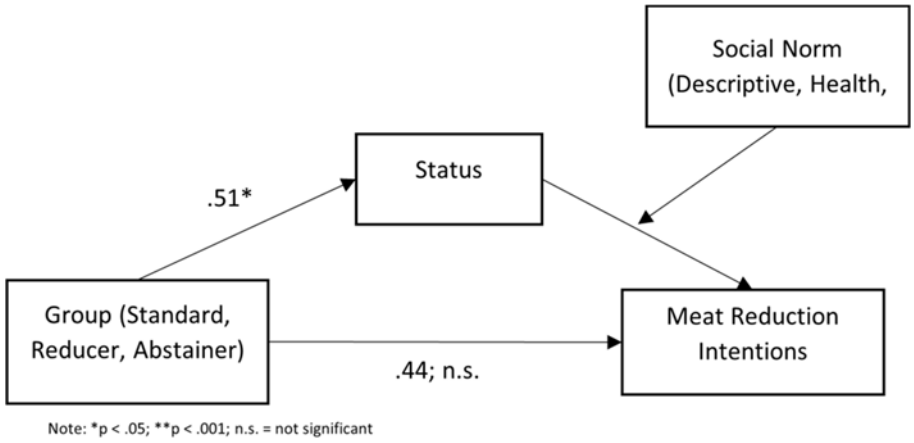

Figure 3 - Moderated Mediation Model of Study 2

4.3. DISCUSSION

The results of study 2 demonstrate that there is an existent link between consumption group and inclination to reduce meat consumption in which the group who consume meat more frequently is less inclined to reduce its intake. The findings indicate that the predictive effect of a group with a more restricted meat consumption on inclination to reduce was mostly explained by increased perceived status of a non-meat consumer identity, and it was shielded by social norms. This study provides additional evidence that a non-meat consumer has a more positive social identity, since one way to increase positivity is to increase the social status of the group upon which it is based (Martin & Rubin, 2016). These discoveries are consistent with the social status theory, as the status assigned to a group is an indicator of its influence on consumer behavior (Grier & Deshpandé, 2001), and therefore prove that a group representing a minority, such as non-meat consumers, are capable of influencing others based on their status. Furthermore, the moderation of social norms adds to the picture that status interacts with inclination to reduce meat consumption. Specifically, when individuals are exposed to a descriptive social norm, where cues about others' behaviors regarding meat reduction are provided, participants' status perceptions of a non-meat consumer are accentuated, showing how they are suitable for changing behaviors (Melnyk et al., 2021). Similarly, exposure to health social norms, in which risky health behaviors associated to meat consumption are highlighted, conveys a higher status to non-meat consumers. On the other hand, when participants are submitted to a control condition, where a social norm unrelated to meat consumption is presented, there is less inclination to reduce meat consumption.

5. GENERAL DISCUSSION

Our findings indicate that the sense of esteem and status perceived by an individual towards a non-meat consumer positively influences one's meat reduction intentions. Through two studies, we analyzed how esteem and status, with the presence of social norms, impact the aspiration to adopt a social identity of a meat reducer, and consequently act in that manner by reducing intake. Next, theoretical and practical implications, as well as possible limitations and orientations for future research are addressed.

5.1. THEORETICAL CONTRIBUTIONS

The present research contributes to identify the personality traits associated with a meat reducer identity that can act as triggers to a more conscious and restricted meat consumption diet. From a theoretical perspective, this paper explores the concept of social identity in a relatively understudied manner. Plentiful research has mainly addressed social identity as a unidimensional variable, while it is a multi-dimensional concept (McGowan, Shiu & Hassan, 2016), and for that reason it was tackled as a set of different dimensions, where each one has its own importance. In addition, due to the fact that social identity has proven to impact consumer behavior in several distinct topics, namely healthy eating (Banas et al., 2016) and eating behavior in general (Liu, Thomas & Higgs, 2019), disposal behavior (Trudel, Argo & Meng, 2016), vegetarian motivations (Plante et al., 2019), health and wellbeing (Jetten et al., 2017), cultural tastes (Berger & Heath, 2008), consumer preferences (White & Argo, 2009), this study is the first, to our knowledge, to associate aspects of social identity with social norms.

Further, this paper adds to the existing research on meat consumption by exploring consumers' self-regarded motivations to reduce it by tackling the influence of the desire to achieve esteem and status as hedonistic motivations to meat restriction, while other studies have mainly considered altruistic and health-related motivations (Piazza et al., 2015; Hayley, Zinkiewicz & Hardiman, 2015; Janssen et al., 2016; Lentz et al., 2018; Plante et al., 2019). Although social identity has already been considered a distinct motivational facet to the other several justifications used by individuals for avoiding meat (Plante et al., 2019), esteem and status attainment in particular have never been identified as motivations. Therefore, this study found that a meat reducer is, in some way, seen as a pride and status symbol, perhaps due to their levels of morality, ethics, and health-consciousness compared to meat eaters, which also provides additional knowledge to both esteem and status theories. Moreover, the fact that the majority of existent papers only contemplate vegetarians' or vegans' attitudes and motivations (Piazza et al., 2015; Mullee et al., 2017; Trudel, Argo & Meng, 2016; Bagci & Olgun, 2019; Plante et al., 2019; Rothgerber, 2014) highly limit conclusions, not only because it is a minority and an unconventional practice, but also because it is more probable for people to make a reduction than a total abstinence. So, the focus on meat reduction in this study is worthwhile, as it considers a much higher portion of the population, and therefore will have a much greater impact with its findings.

Lastly, this study adds to the extant knowledge on social norms, showing that descriptive norms about others' behavior and health messages underlining the problems of meat consumption are efficient in influencing people's meat reduction intentions, as it reveals the correct conduct to take in a specific context (Cruwys, Bevelander & Hermans, 2015). Overall, these conclusions strengthen other researchers' conclusions, in considering the use of descriptive and health social norms to motivate sustainable behaviors, such as eating behavior (Liu, Thomas & Higgs, 2019). Furthermore, this paper sheds light on the possibility that meat consumption is ceasing to be the prevalent norm in food culture and a default choice in a social norm perspective as it used to be (Rosenfeld & Burrow, 2018), and perhaps minimizing its consumption is a more suitable action in the modern society, where meat consumption is starting to be a criticized or scrutinized practice (Piazza et al., 2015).

5.2. MANAGERIAL AND SOCIAL IMPLICATIONS

The current study demonstrates how aspiring to identify with a certain social identity contributes to a sustainable meat consumption behavior, particularly showing the importance of emphasizing

positive personality traits of a person who reduced meat intake. Our findings reveal that social norms enhancing the harms of an excessive and unconscious meat consumption are powerful tools to promote a more sustainable consumption, thus helping non-profitable and profitable organizations oriented to encourage alternative options to meat, as well as protecting the animals, the environment, and public health. In fact, increasing population's attention to animal treatment and how meat is produced, could affect global meat markets (OECD & FAO, 2020). So, it is advisable that marketeers use an awareness approach, to educate consumers on the impacts of their decisions.

Governmental and non-governmental organizations could take our findings into consideration when developing communication strategies, namely in aspirational advertising, where products are associated with social outgroups that the consumer desires to fit in (Dimofte, Goodstein & Brumbaugh, 2015). This study may be important in understanding if identity-linking and identitythreat strategies work in shifting consumption habits in the direction of healthier ones. This way, marketers and companies may be able to develop successful campaigns that promote public health (Ivanic, 2016). Nevertheless, they should understand which aspects of a desired social identity are most likely to motivate individuals to take action, as well as how to target and segment consumers depending on the group they belong to.

Regarding social implications, we believe that this paper will provide professionals and citizens with important insights. By emphasizing and spreading the message that a meat reducer identity is superior in several traits, and consequently making people understand that eating meat has its own negative effects, people will become more conscious and opt for a more balanced diet. Hence, it is estimated that mortality will reduce by 6 to 10%, public health is improved, greenhouse gas emissions are decreased, and several economic benefits are generated (Mullee et al., 2017). Similarly, with the standard meat consumers' change of behavior, the impact on animal agriculture would be much lower, causing organic meat and animal-friendly production to be more common practices (Janssen et al., 2016), and subsequently contribute to animal welfare.

5.3. Limitations and Future Research

It is probable and recognizable that this research has some limitations. Our findings were achieved through experimental studies measuring participants' perceived esteem and status. For instance, it remains unclear if these conclusions remain the same for real-life situations, so additional experiments in laboratory and field settings should be applied. Future research could replicate our studies in a real setting in which participants are given the possibility to actually choose the type of food to consume, such as restaurants or supermarkets, using printed flyers of descriptive and health messages about meat reduction. Also, since our data included qualitative analysis, there might be some drawbacks in terms of interpretation, for that we recommend employing interviews or focus groups to obtain more accurate and stronger results.

Another limitation of this study is that we considered only esteem and status as aspirational personality traits of a meat reducer identity. A possible direction for future research may be to consider not only other aspects of social identity, since people believe that meat reducers or abstainers are morally admirable and deserve credit (Piazza et al., 2015), but also with the influence of other hedonistic factors that could serve as reasons to moderate meat intake. For instance, Ivanic (2016) has shown that racial acceptability can change results in regard to healthy food. Upcoming studies could also verify the influence of social factors, such as the expectations of others and context. Moreover,

the existence of strong and formal rules in different cultures can also impact results, as health appeals are more effective in tight cultures than loose ones (Li, Gordon & Gelfand, 2017).

An additional viable consideration is that meat consumption may not be the only field where individuals act on, motivated by perceived esteem and status. One future research area could be understanding in which other unsustainable practices these conclusions could apply, since several studies have found a direct relation between social identity and consumer behavior. In fact, Chapman, Masser & Louis (2020) have shown that in charitable giving contexts, identity motives are as common or even more common than any other motive traditionally given, showing how the same can happen in other contexts, because it is a subconscious motivator.

6. CONCLUSION

This study revealed that both esteem and status play an important role in determining consumers' willingness and inclination to consume less meat, since these are valued aspects of a meat reducer social identity. These insights on consumer behavior allow to understand some hedonistic motivations behind the decision of cutting meat from one's diet, especially among meat consumers exposed to the presence of a non-meat consumer or who already made a reduction. Therefore, our findings can help to achieve a more effective decision regarding strategies aimed at raising awareness of the harms associated with meat consumption. In fact, descriptive and health social norms, that, respectively, reveal others' behavior in regard to meat reduction and for the damages of an unconscious meat consumption, have demonstrated to influence positively one's predisposition to act accordingly. Notably, as this research shows initial evidence that the desire to achieve some aspects of a desired social identity can motivate sustainable food choices, further research is required to determine which other traits can be instigators and in which other fields of sustainable consumption does this apply.

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8. APPENDIXES

Appendix A - Scales and Measures of Study 1

Constructs	Measurement items	Adapted from
Morality	Based on the knowledge you currently have about Maria, you guess she is… (1 = Not at all and 7 = Very much) 1) Caring 2) Compassionate 3) Fair 4) Friendly 5) Generous 6) Helpful 7) Honest	(Samper, Yang & Daniels, 2017)
Morality	Based on the knowledge you currently have about Maria, you guess she is… (1 = Not at all and 7 = Very much) 1) Concerned 2) Ethical 3) Kind-hearted 4) Moral	(Olson et al., 2016)
Perceived Healthfulness	When you think about Maria and her lifestyle, you imagine she... (1 = Not at all and 7 = Very much) 1) Is healthy 2) Is hardworking 3) Is disciplined 4) Follows norms 5) Is health conscious	(Steim & Nemeroff, 1995)
Mood	Run into people like Maria, makes you feel... (1 = Not at all and 7 = Very much) 1) Happy 2) Anxious	(Liu, Thomas & Higgs, 2019)
Feelings of Threat	Run into people like Maria, makes you feel... (1 = Not at all and 7 = Very much) 1) Threatened 2) Attacked 3) Challenged	(Dalton & Huang, 2014)
Trust	Run into people like Maria, makes you feel... (1 = Not at all and 7 = Very much) 1) Suspicious 2) Concerned	(Packard, Gershoff & Wooten, 2016)
Modesty	People like Maria… (1 = Strongly disagree and 7 = Strongly agree) 1) Believes they are better than others. 2) Thinks highly of themselves. 3) Make themselves the center of attention. 4) Disklike talking about themselves.	(Packard, Gershoff & Wooten, 2016)
Interest	Upon the information presented about Maria, how interested would you be to meet and know more about her? (1 = Not at all interested and 7 = Extremely interested)	(Dalton & Huang, 2014)

Similarity	How similar do you believe Maria is to you? (1 = Not at all similar to me and 7 = Very much similar to me)	(Packard, Gershoff & Wooten, 2016)
Perceived Discrimination	To what extend do you think Maria is discriminated because of her identity? (1 = Not at all and 7 = All the time)	(Bagci & Olgun, 2019)
Social Identity Needs	Regarding Maria, to what extend do you agree with the following statements: (1 = Strongly disagree and 7 = Strongly agree) 1) She should feel proud. 2) She should feel a sense of belonging. 3) She should feel special.	(Bagci & Olgun, 2019)
Meat Consumption Frequency	How many days per week do you eat meat? 1) 6-7 days per week 2) 4-5 days per week 3) 2-3 days per week 4) 1 day or less per week 5) None, because I do not eat meat	(Boer, Schösler & Aiking, 2017)
Meat Reduction Intentions	Have you already or are you currently making any efforts to reduce your personal meat consumption? 1) Yes 2) No	(Lentz et al., 2018)
Meat Reduction Willingness	How willing would you be to consider reducing your meat consumption sometime in the near future? (1 = Not at all willing and 7 = Extremely willing)	(Lentz et al., 2018)

Appendix B - Qualitative Analysis of Study 1

Condition	Category	Count	Keywords	Conclusion	Notes
Maria as a Meat Consumer	Not valid	4	No thoughts	There are 46 valid answers in the meat condition.*	*the answers considered valid are all those that are composed of at least one well-written word, relevant to answer the proposed question, and that express an opinion.
	Normal person	15	Normal, average, ordinary, typical, common, mainstream, a person like any other	32,6%* of people consider a meat consumer a normal person.	*considering only valid answers of people exposed to the meat condition.
	Healthy person	14	Healthy, balanced	30,43%* of people consider a meat consumer a healthy person.	*considering only valid answers of people exposed to the meat condition.
	Happy person	16	Happy, smile	34,78%* of people consider a meat consumer a happy person.	*considering only valid answers of people exposed to the meat condition.
	Not so good habits	5	"She should include vegetarian meals in her diet once in a while", "I wouldn't have her diet", "not well informed", "not aware", "should start making different choices, and maybe eat less meat"	10,86%* of people recognize that a general meat consumer could have better habits.	*considering only valid answers of people exposed to the meat condition.
Maria as a Non-meat Consumer	Not valid	2	Don't know	There are 48 valid answers in the non-meat condition.*	*the answers considered valid are all those that are composed of at least one well-written word, relevant to answer the proposed question, and that express an opinion.
	Concerned with the Environment	26	Worries/cares/concerns about the environment, well-being of the planet, sustainability, organic/green lifestyle, climate change	54,17%* of people consider a non-meat consumer a person concerned with the environment and the well-being of the planet.	*considering only valid answers of people exposed to the non-meat condition.
	Concerned with Animal Welfare	14	Animal well-being, animal lover, animal rights,	29,16%* of people consider a non-meat consumer a person concerned with animal well-being.	*considering only valid answers of people exposed to the non-meat condition.
	Healthy person	20	Healthy, worries about her health, well-being	41,67%* of people consider a non-meat consumer healthy person, concerned with his/her own well-being.	*considering only valid answers of people exposed to the non-meat condition.

Appendix C - Scales and Measures of Study 2

Constructs	Measurement items	Adapted from
Reduction Intentions	1)How likely would you be to reduce your meat consumption? (1 = Very unlikely and 7 = Very likely) 2) How willing are you to reduce your meat consumption? (1 = Very unwilling and 7 = Very willing) 3) How inclined are you to reduce your meat consumption? (1 = Very uninclined and 7 = Very inclined)	(White et al., 2015)
Meat Consumption Frequency	How many days per week do you eat meat? 1) 6-7 days per week 2) 4-5 days per week 3) 2-3 days per week 4) 1 day or less per week 5) None, because I do not eat meat	(Boer, Schösler & Aiking, 2017)

Strength of Identification with the Ingroup	To what extent do you agree with the following statements: (1 = Strongly disagree and 7 = Strongly agree) 1) I feel strong ties to other (ingroup members). 2) Overall, being a (ingroup member) has a lot to do with how I feel about myself. 3) In general, being a (ingroup member) is an important part of my self-image. 4) In general, I am glad to be a (ingroup member). 5) I feel good about being a (ingroup member). 6) Thinking about the fact that I am a (ingroup member) does not give me bad feelings.	(Dalton & Huang, 2014)
Snap Judgements	To what extent do you agree with the following statements about the person you met: (1 = Strongly disagree and 7 = Strongly agree) 1) This person is honest. 2) This person is nice. 3) This person is attractive. *Status Items* 4) This person has high status. 5) This person is respected.	(Liu, Thomas & Higgs, 2019)
Similarity	How similar do you believe Maria is to you? (1 = Not at all similar to me and 7 = Very much similar to me)	(Packard, Gershoff & Wooten, 2016)
Perceived Discrimination	To what extent do you think Maria is discriminated because of her identity? (1 = Not at all and 7 = All the time)	(Bagci & Olgun, 2019)
Feelings of Threat	Regarding Maria, to what extent do you feel… (1 = Not at all and 7 = Very much) 1) Threatened 2) Attacked 3) Challenged	(Dalton & Huang, 2014)
Trust	Regarding Maria, to what extent do you feel… (1 = Not at all and 7 = Very much) 1) Suspicious 2) Concerned	(Packard, Gershoff & Wooten, 2016)
Collective Selfesteem	To what extent do you agree with the following statements: (1 = Totally disagree and 5 = Totally agree) 1) I am a worthy member of the social groups I belong to.	(Dutot, 2020)
	2) I do not regret that I belong to some of the social groups I do. 3) Overall, my social groups are considered good by others. 4) Overall, my group memberships have a lot to do with how I feel about myself. 5) I feel I have much to offer to the social groups I belong to. 6) In general, I am glad to be a member of the social groups I belong to. 7) Most people consider my social groups, on the average, to be more ineffective than other social groups. 8) The social groups I belong to are an important reflection of who I am. 9) I am a cooperative participant in the social groups I belong to. 10) Overall, I feel that the social groups of which I am a member are worthwhile.	

Demand Checks	How would you rate the poster in terms of: (5-point Likert scale) 1) Believability 2) Relatability 3) Meaning 4) Clarity 5) Professional appearance	(Liu, Thomas & Higgs, 2019)
Health Regulatory Focus	To what extent do you agree with the following statements: (1 = Strongly disagree and 7 = Strongly agree) *Health Promotion Items* 1) I do not hesitate to embrace new experiences if I think they can improve my health. 2) If I succeed in reaching a health goal, this motivates me to go further. 3) I think that taking care of my health is pleasurable. 4) I see myself as someone who does my utmost to improve my health. 5) If I see a good opportunity to improve my health, I take advantage of it right away. *Health Prevention Items* 1) I frequently think about the health problems I may have in the future. 2) When I implement a health behavior, it's because I want to protect myself from getting sick. 3) I often worry about mistakes I could make concerning my health.	(Gomez, Borges & Pechmann, 2013)